

DSJ-10157-1US
S.N. 10/608,564

Page 7

REMARKS

As requested, a new Abstract is submitted herewith and the Examiner's suggestion that the Abstract refer to the end wall caps and the side wall caps has been adopted.

Claim 1 has been amended to overcome the objections of indefiniteness and the Examiner's language suggestion has been adopted.

With respect to the rejection based on the prior art combination of the present inventor's earlier publications WO/93/24714 and WO/94/21867 and German Reference No. 2235332, it is respectfully submitted that the amended claims clearly and patentably distinguish over these references.

Dealing with applicant's earlier Wo/93/24714, the item shown in Figure 8 labeled 27 is a beam of the same construction as the panels 2 and simply comprises an extruded hollow member covered with a coextruded skin identified in the lower portion of Figure 8 as 47 covering a substrate 46. This skin 47 is only a small fraction of a millimeter in thickness. The support shelf 30 of this reference is an entirely different member than the beam 27 and fits on top of the beam and has to have special flanges 31 under which the bottom edges of the roof panels have to be introduced requiring considerably accuracy and care in order to locate the upper end of the roof panel assembly. In addition, the roof beam 27 does not span between the end walls but is supported cantilever fashion between the end walls by inwardly projecting yokes 28 to which it is bolted. The yokes in turn are cantilevered out from columns 14. In contrast, in the present invention, applicant utilizes a metal beam which is supported directly by the end walls and carries a single integral member, namely, the sleeve 32. Sleeve 32 in turn has integral downwardly sloping support shelves at each side located below the top of the beam so that the beam itself with the encasing sleeve provides the stop for the upper ends of the roof panels as they are pushed or slid upwardly into place on each side of the ridge.

Applicant's other cited reference WO/94/21867 is directed to enclosing a metal beam with a plastic sleeve (which has applicant's usual coextruded skin) in order to provide the beam with the interlocking formations 12 so that other of his components could be interlocked therewith. As shown in Figure 10, the interlocks 12 are used to

DSJ-10157-1US
S.N. 10/608.564

Page 8

slideably mount a roof panel upper end support 34 on top of the beam. As shown in Figure 9, the beam again does not extend between the end walls but is supported in between the end walls by a cantilever support shelf. In this case, in using a metal beam, the applicant required an additional member 7 to encompass the metal beam as well as the top assembly 34 and the cantilevered beam end supports 22. As before, all of this has been replaced in the present invention by simply supporting the metal beam directly upon the end walls and providing it with the one piece plastic sleeve 27 with the integral support shelves 33 located below the top of the beam with the beam itself limiting upward movement of the roof panels.

Neither of these references, of course, discloses the use of end wall caps having the inwardly projecting flanges with the intumed locking fingers. With applicant's present invention, once the side wall caps with their upwardly sloping support platforms and the end wall caps with their intumed interlocking formations are installed, the roof panels which have interlocking formations that will interlock with the intumed fingers of the end caps can be simply be pushed upwardly into place until the upper ends are stopped by the beam assembly. At this point the upper ends of the roof panels are supported on the underside by the sleeve support shelves while the lower ends of the roof panels are supported on the underside by the wall cap platforms. After being pushed up, they can then be secured by screws.

The German Reference No. 2235322 is entirely different and applicant is at a loss to see how the German roof can possibly be assembled. The side wall connecting moldings or wall caps 17 have inwardly projecting channels 17b which project inside the side wall plates 12 on which they are mounted, that is they project into the interior of the greenhouse. The lower ends of the roof plates are seated in these channels 17b of the side wall moldings or caps 17. The upper ends of the roof plates 12 fit into the channels 21c and 21d of roof ridge member 21 which is unsupported except by the roof panels which project upwardly from each side of the greenhouse. If the wall caps 17 were put in position, some arrangement would have to be made to insert the roof panels into the roof connector 21 such as holding the panels 12 in position and then subsequently sliding on the roof connector 21.

With respect to the so called roof connecting moldings 16 which are purported to span between the apex of the greenhouse and the sidewall panels, they have

DSJ-10157-1US
S.N. 10/608.564

Page 9

to extend well beyond the length of the roof panels 12 at each of their ends. Neither the sidewall caps 17 nor the top connector 21 have any means for interlocking with the roof moldings 16.. Obviously the roof panels 12 cannot be pushed upwardly or moved at all relative to the sidewall moldings 17 if the sidewall moldings 17 extend the full length of the sidewalls, as they are shown, because they would block any possibility of making a sliding connection between the roof panels and the end wall moldings 16. If the side wall moldings or caps 17 don't extend the full length of the sidewalls, then the corners of the greenhouse would be open.

It is respectfully submitted that this disclosure does not disclose a practical roof system and even the draftsman had difficulties as will be seen from Figure 1. If the end wall molding 16 at the front of the building of Figure 1 is traced down to where it meets with the vertical member 15 and the horizontal member 17 at the point 19 the nearest roof panel 12 appears to project above the end wall molding 16.

Applicant's arrangement is entirely different in that the roof panels are supported only on their undersides by the depending support shelves of the beam sleeve and also at their underside by the platforms of the sidewall caps with nothing to interfere with movement of their lower ends so that they can simply be slid upwardly into place while being slideably interlocked with the end wall caps.

Claim 1 has been amended to recite that the sleeve has spaced sidewalls with one of the sleeve sidewalls extending downwardly of the top of the beam on one side of the beam and central ridge and the other of the sleeve sidewalls extending downwardly of the beam top on the other side of the beam and central ridge with each of the sleeve walls having an integral downwardly supporting roof support shelf located below the top of said beam. This language clearly defines over the references to provide an arrangement where the upper ends of the roof panels are supported on their undersides at a point below the top of the beam. In the claim, the sidewall caps are defined as having upwardly and inwardly sloping roof supporting platforms in slope alignment with the downwardly projecting sleeve shelves at the adjacent side of the sleeve and the end caps are defined as having inwardly projecting flanges terminating in intumed locking fingers with which the roof assembly is slideably interlocked, an arrangement which allows the roof panels to be slid up against the beam.

DSJ-10157-IUS
S.N. 10/608.564

Page 10

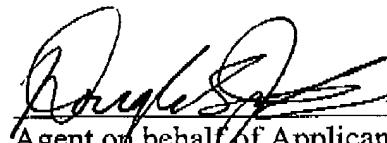
This claim clearly and patentably distinguishes over the prior art for the reasons discussed above. In addition, the claim has been amended so that it is now believed to be clear of any objection on indefiniteness.

Claim 1 and its depending Claims 2 and 3 are now respectively submitted as being allowable.

Claim 4 has been amended along the same lines as Claim 1 and clearly defines over the prior art on the basis discussed above. Claim 4 and its dependent claims are therefore respectively submitted as now being in condition for allowance.

Reconsideration of the application and its allowance is respectfully requested.

Respectfully submitted,



Agent on behalf of Applicant

Douglas S. Johnson

Registration No. 15,945

416-368-8313

DSJ/af
DSJ 10157-IUS